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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,463	04/18/2008	Michael Fee	105967.0763	1294

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EXAMINER	
WARTALOWICZ, PAUL A	
ART UNIT	PAPER NUMBER
1735	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/594,463	FEE ET AL.	
	Examiner	Art Unit	
	PAUL WARTALOWICZ	1735	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 April 2011*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9 and 27-32* is/are pending in the application.

4a) Of the above claim(s) *27-32* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *04/18/2008, 10/21/2009*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Group I, claims 1-9 in the reply filed on 04/15/2011 is acknowledged. The traversal is on the ground(s) that method claim 1 is distinguished from the prior art by the step of "cutting the substrates...so that said serpentine conductor elements are cut from their larger substrate from their larger substrate back to back with similarly oriented element portions of the serpentine conductor elements being cut from common parts of the larger substrate across a width of the substrate" and that product claim 27 corresponds with this feature. This is not found persuasive because the prior art renders obvious this feature as described below.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recitation in claim 1, lines 9-11 of "the larger substrate back-to-back with similarly oriented element portions of the serpentine conductor elements being cut from common parts of the larger substrate" renders the claims indefinite. It is unclear what the larger substrate is; it appears that the claims only require one substrate. Additionally, it is unclear what is meant by "back-to-back". What is the "back"? As the

"back" has not been defined, the "back" is interpreted as the side of the serpentine strip adjacent to the side of the next serpentine strip cut from the substrate.

Claim 1 recites the limitation "the larger substrate" in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leghissa (WO 03/100875 (US 2005/0227873 will be referred to herein)).

Leghissa teaches a method for forming a high temperature superconductor conductor (para. 0015) comprising transposed conductor elements (para. 0022) comprising forming a layer of an HTS on one or more substrates and cutting the substrates with an HTS layer thereon (para. 0019) into a multiple number of generally

longitudinally extending serpentine conductor elements each comprising a series of element portions which periodically change direction relative to one another in a plane of the substrate

Leghissa fails to teach the limitation of said serpentine conductor elements are cut from the substrate back to back with similarly oriented element portions of the serpentine conductor elements being cut from common parts of the substrate across a width of the substrate.

However, Leghissa teaches that it is advantageous to combine conductor elements that are designed in the same way (para. 0021). Cutting serpentine conductors from the same substrate would enable conductor elements to be designed in the same way.

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide cutting serpentine conductors from the same substrate in Leghissa in order to enable conductor elements to be designed in the same way (para. 0021) as taught by Leghissa.

Additionally, it appears that this teaching in Leghissa meets the limitation of the said serpentine conductor elements are cut from the substrate back to back (back to back being interpreted as the side to side arrangement of the cut superconductors) with similarly oriented element portions of the serpentine conductor elements being cut from common parts (the substrate) of the substrate across a width of the substrate

Additionally, Leghissa teaches interleaving the serpentine conductor elements to form a longitudinally extending transposed HTS conductor (para. 0020, 0022, fig. 3).

Regarding claims 2-3, Leghissa teaches that a first set of conductor element portions having a generally common longitudinal axis and a second series of element portions having a generally common longitudinal axis which is spaced from the longitudinal axis of said first portions in a plane of the substrate, with connecting portions of the substrate elements between, wherein a layer of HTS is formed on the surface of the elements. See Leghissa at fig. 2, section V.

Regarding claims 4 and 5, Leghissa teaches that the connecting portions are shorter than the conductor elements (the connecting portions are the portions on an angle delineated by section H in figures 2 and 3.

Regarding claims 6-9, Leghissa teaches that the serpentine conductor elements comprise a firs series of generally parallel element portions which extend at an angle across a longitudinal axis of the conductor element in a first direction and a second series of spaced generally parallel element portions which extend across the longitudinal axis of the conductor element in opposite directions (fig. 2, 3; section H and the parallel angled conductor elements in figure 2, and the next section of oppositely angled sections across the longitudinal axis). Additionally, there are connection portions of the conductor elements between adjacent ends of the element portions of first series and the second series (the straight portions of the conductor are interpreted as the connecting portions connecting the first series (section H) and the second series (next section of oppositely angled sections across the longitudinal axis), fig. 2, section H).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAUL WARTALOWICZ whose telephone number is (571)272-5957. The examiner can normally be reached on 8:30-6 M-Th and 8:30-5 on Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jessica L. Ward can be reached on (571) 272-1223. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Paul A Wartalowicz/
Examiner, Art Unit 1735